



Property Risk Consulting Guidelines

PLUG-TYPE VALVE SUPERVISORY DEVICES

INTRODUCTION

Supervision of all fire protection control valves 2½ in. (65 mm) or larger is a very important element of a fire alarm system used to supplement or supplant standard watchman service. This is consistent with National Fire Alarm Code requirements.

Underwriters Laboratories Inc. lists several supervisory devices for use with outside stem and yoke (OS&Y) sprinkler control valves or other hand-wheel-operated valves. These include the “plug-type” (see Figure 1) supervisory devices consisting of a switch and a cable-connected plug.

The switch is mounted on the valve body or an adjacent wall or ceiling. The cable is threaded through the operating wheel of the valve and plugged into the switch. When the cable is unplugged to permit operating the valve, the switch initiates a valve supervisory off-normal signal. The plug cannot be reinserted into the switch until a key-operated reset lock is operated.

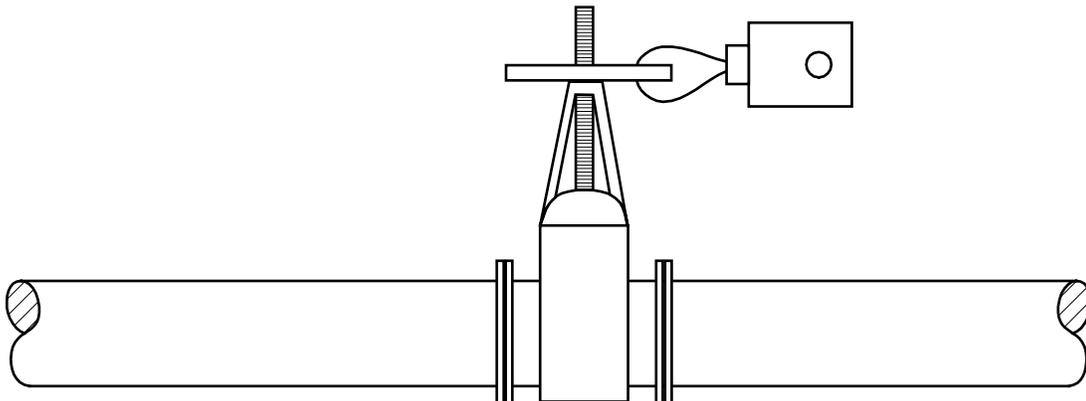


Figure 1. Plug-type Supervisory Device

POSITION

Replace plug-type supervisory devices with “plunger-type” or “finger-type” listed valve supervisory switches.

Note: Sprinkler control valves or water supply valves located in a pit may be chained in the open position with a hard shackle lock in lieu of provision of a supervisory device in a damp atmosphere, which may be a confined space.

DISCUSSION

AXA XL Risk Consulting recommends the replacement of plug-type supervisory devices as it is possible to reinsert the plug without reopening the valve and restoring protection. Most fire alarm system installers provide reset keys quite liberally. The action of this key can also be duplicated with needle nose pliers.

Pit valves may be unsupervised based on the probability of problems of water or condensation within the devices as well as the inability to readily test valve supervisory devices in a confined space. Weekly visual inspection of pit valves is recommended as a part of the self-inspection of fire protection equipment.